

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of

FOGARTY

Atty. Ref.: 839-1159

Serial No. (to be assigned)

Group:

Filed: January 4, 2002

Examiner:

For: COMBINED DELTA-WYE ARMATURE  
WINDING FOR SYNCHRONOUS GENERATORS  
AND METHOD

\* \* \* \* \*

January 4, 2002

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

**PRELIMINARY AMENDMENT**

In order to place the above-identified application in better condition for examination, please amend the application as follows:

**IN THE SPECIFICATION**

Before the paragraph beginning at page 1, line 3 (before BACKGROUND OF THE INVENTION), add the following new paragraph:

--This application is a divisional of application Serial No. 09/671,124, filed September 28, 2000, now U.S. Patent No. 10/\_\_\_\_\_, issued \_\_\_\_\_.--

**IN THE CLAIMS**

Cancel claims 1 through 7 and add the following new claims 8 through 13:

--8. A method for connecting armature windings in an electrical machine, wherein the armature windings include a plurality of phase windings, said method comprising the steps of:

a. segmenting each of the plurality of phase windings into a first winding segment and a second winding segment by establishing a connection point at one of a plurality of available connection points on said phase winding;

b. at the established connection point, connecting an end of the first winding segment in each phase winding to an end of the first winding segment in another of said phase windings to form a Delta winding topology, and

c. at the established connection point, connecting a first end of one of said second winding segments to a plurality of connected ends of said each of said first winding segments to form a Wye topology about each connection point.

9. A method as in claim 8 wherein the available connection points are at end turns of the phase winding, and the established connection point is a contact tap at a selected end turn of the phase winding.

10. A method as in claim 8 wherein the first and second winding segments are in-phase.

11. A method as in claim 8 wherein an opposite end of said second winding segment is connected to an external terminal of said windings.

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12. A method as in claim 8 where said plurality of phase windings include three phase windings, and each of said three phase windings has an established connection point, and further comprising forming an external connection at an opposite end of each of the second winding segments to establish a three-phase power connection to the phase windings.

13. A method as in claim 8 further comprising the step of establishing a line-to-line output level ( $V_{LL}$ ) between each of said phase windings in accordance with the following expression:

$$V_{LL} = |Xe^{j\pi/6} + \sqrt{3}(1 - X)|$$

where: " $V_{LL}$ " is the line-to-line voltage as a proportion of a phase winding voltage level;

"X" is a fraction of a phase winding arranged in a Delta topology, and

"j" is a complex operator, wherein  $j^2 = -1$ .

**REMARKS**

This preliminary amendment serves to present non-elected parent claims 8 through 13 for examination in this divisional application.

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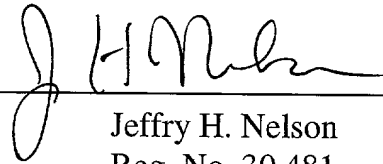
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Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made.**"

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

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